

# KENWOOD

Listen to the Future



## TK-7180(H)/8180(H)

VHF/UHF FM Mobile Radios

**FleetSync®**  
by KENWOOD

### GENERAL FEATURES

- 30/50 W (136-174 MHz)
- 30/45 W (450-520, 400-470 MHz)
- Conventional & LTR® Zones
- MPT1327 Trunking Option
- Remote Control Head Option¹
- 12 Character Alphanumeric Aliases
- Backlit Dot Matrix LCD
- 3-Digit Sub-Display
- Function / Status LCD Icons
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 6 Backlit PF Keys
- Emergency / AUX Key
- Enhanced Kenwood Audio
- Front Panel Speaker
- Companded Audio
- Voice Inversion Scrambler Built-in
- Easy Option Port
- Encryption / ANI Board Control
- VGS-1 Voice Guide / Storage Option
- Emergency Call Features
- DTMF Encode / Decode²
- Special Alert Tone Patterns³
- Call Key⁴
- Time Out Timer

- Busy Channel Lockout
- Timed Power Off
- DB-25 Accessory Connector⁵
- 9 Programmable AUX I/Os⁵
- 2 Programmable AUX Outputs⁵
- Ignition Sense⁶
- Public Address / Horn Alert Option⁷
- MIL-Spec Standard Mic
- MIL-Spec 12-Key DTMF Mic Option
- Windows® Programming & Tuning⁸
- Windows® Firmware Uploading⁸
- Front Panel Test / Tune
- Cloning
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"⁹
- IP-54/55 Water & Dust Intrusion⁹

### CONVENTIONAL ZONES

- 512 Channels / 128 Zones¹⁰
- QT / DQT
- Two-Tone Decode¹¹
- Single / Two-Tone Encode¹¹
- Operator Selectable Tone¹¹

- Dual Priority Scan
- Single & Multi-Zone Scan
- List Scan

### TRUNKED ZONES

- 512 GID / 128 Zones¹⁰
- Kenwood LTR® Features¹²

### FleetSync®

- FleetSync® or FleetSync® II¹³
- PTT ID Digital ANI
- Selective Call & Group Call
- Status Messaging
- Emergency Status
- Caller ID Display
- Short & Long Text Messages¹⁴
- Power On/Off Status Messages
- Input / Output Status Messages
- FleetSync® GPS Ready¹⁵
- Send GPS PF Key¹⁵
- PTT ID & Emergency GPS Reporting¹⁵
- Status Message Block GPS Reporting¹⁵
- Ignition On/Off GPS Reporting¹⁵,¹⁶
- VGS-1 GPS Data Storage¹⁵,¹⁶
- PC Serial Interface





## Options

■ **KMC-35**  
Microphone  
(supplied microphone)



■ **KMC-36**  
Keypad Microphone



■ **KMC-9C**  
Control Station  
Desktop Microphone



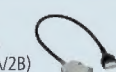
■ **KRK-10**  
Control Head  
Remote Kit (23ft/7m)



■ **KCT-46**  
Ignition Sense Cable



■ **KCT-40**  
Radio Interface Cable  
(for KDS-100, KGP-2A/2B)



■ **KCT-23M**  
DC Cable (Dash  
mount / 10 feet)



■ **KCT-23M3**  
DC Cable (Remote  
mount / 23 feet)



■ **KAP-2**  
Horn Alert/Public  
Address Relay Unit



■ **VGS-1**  
Voice Guide &  
Storage Unit



■ **KES-3**  
External Speaker



■ **KES-5**  
External Speaker  
(requires KAP-2)



■ **KMB-10**  
Key Lock Adapter



■ **KLF-2**  
Line Noise Filter



■ **KPS-10A**  
DC Power Supply



■ **KPS-15**  
DC Power Supply



■ **KDS-100**  
Mobile Data Terminal



■ **KGP-2A/2B**  
GPS Receiver /  
Modem Unit



GPS-2A

GPS-2B

## Specifications

All accessories and options may not be available in all markets.  
Contact an authorized Kenwood dealer for details and complete list of all accessories and options.

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
<b>GENERAL</b>				
Frequency Range				
Type 1	136~174 MHz		450~520 MHz	450~512 MHz
Type 2	—		400~470 MHz	
Number of Channels*				
Zone		Max.128 per Radio		
Ch/GID		Max.250 per Zones		
		(Max.512 [Conv.Ch's +GID's] total per Radio)		
Channel Spacing				
Wide	25 kHz, 30 kHz		25 kHz	
Narrow	12.5 kHz, 15 kHz		12.5 kHz	
Operating Voltage		13.6 V DC±15 %		
Current Drain				
Standby	0.4 A	0.4 A	0.4 A	0.4 A
Receive	1.0 A	1.0 A	1.0 A	1.0 A
Transmit	9.0 A	13.0 A	9.0 A	13.0 A
Duty Cycle		Transmit: 20 %		
Operating Temperature Range		-22 °F ~ +140 °F (-30 °C ~ +60 °C)		
Frequency Stability		±0.00025 % (-22 °F ~ +140 °F)		
Antenna Impedance		50 Ω		
Channel Frequency Spread				
Type 1	38 MHz		70 MHz	
Type 2	—		70 MHz	
Dimensions (W x H x D), Projections not included		6-5/16" x 1-3/4" x 6-3/16"		
		(160 mm x 45 mm x 157 mm)		
Weight (net)		3.3 lbs. (1.5 kg)		
FCC ID				
Type 1	K4437303110	K4437303210	K4437313110	K4437313210
Type 2	—	—	K4437313120	K4437313220
IC Certification				
Type 1	282F-37303110	—	—	—
Type 2	—	—	282F-37313120	—

\*Maximum capability depends on the number of programmed Zone and repeater channels.

## Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
<b>Low Pressure</b>	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
<b>High Temperature</b>	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
<b>Low Temperature</b>	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
<b>Temperature Shock</b>	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
<b>Solar Radiation</b>	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
<b>Rain</b>	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
<b>Humidity</b>	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4
<b>Salt Fog</b>	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
<b>Dust</b>	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
<b>Vibration</b>	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
<b>Shock</b>	516.2/Procedure I, II, III, V	516.3/Procedure I, IV, V	516.4/Procedure I, IV, V	516.5/Procedure I, IV, V
<b>International Protection Standard</b>				
<b>Dust &amp; Water Protection</b>	P54: Radio itself P54/55: Remote Head with KRK-10			

\*To meet above Mil810 and IP grade, weather proof microphone KMC-35 or KMC-36 has to be connected.

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
<b>RECEIVER (Measurements made per EIA/TIA-603)</b>				
Sensitivity (12dB SINAD)				
Wide			0.25 μV	
Narrow			0.28 μV	
Selectivity**				
Wide	80 dB		80 dB	
Narrow	70 dB		67 dB	
Intermodulation Distortion				
Wide/Narrow		75 dB (±50, 100 kHz)		
Spurious Response**	90 dB		85 dB	
Audio Output (4 Ω Impedance)		4 W with less than 5 % distortion		
<b>TRANSMITTER (Measurements made per EIA/TIA-603)</b>				
RF Output Power				
Type 1	30 to 1 W	50 to 10 W	30 to 1 W	45 to 10 W
Type 2	—	—	(490-520 MHz/25 to 1 W)	(490-512 MHz/40 to 10 W)
Spurious Response		70 dB	30 to 1 W	45 to 10 W
Type of Emission				
Wide			16K0F3E	
Narrow			11K0F3E	
FM Hum & Noise				
Wide			50 dB	
Narrow			45 dB	
Microphone Impedance			600 Ω	
Audio Distortion				
Wide/Narrow			3 %	

\*\* Typical specifications  
Kenwood follows a policy of continuous  
advancement in development. For this reason  
specifications may be changed without  
notice.

FleetSync® is a registered trademark of  
Kenwood Corporation.  
LTR® is a registered trademark of Transcript  
International.

footnotes from Front:

- 1 KRK-10 remote control kit required.
- 2 DTMF includes PTT ID, Emergency ANI, Manual Encode (KMC-36), Auto-Dial (9 numbers) & Stun.
- 3 Special Alert Tone Patterns operate for 2-Tone, DTMF, FleetSync® selective call decode.
- 4 Call Key: 6 keys max.; operates for 2-Tone, DTMF and FleetSync status encode.
- 5 DB-25 ACC supports 15 Remote Zone/CH/GID selections, KGP-2A/B (KCT-40 required), KDS-100 (KCT-40 required), data modem, MDT, interconnect.
- 6 KCT-46 ignition sense cable option required; plugs into mobile ignition sense pig-tail cable.
- 7 KAP-2 required: Horn Alert operates for FleetSync®, 2-Tone or DTMF selective call decode.
- 8 KPG-89D required: Windows®98/ NT/ 2000/ Me/XP compatible; English/Spanish screen languages.
- 9 MIL-STD "Driven-Rain" and IP-55 Water/Dust Intrusion apply to remote control head only; IP54 applies to radio chassis.
- 10 Conventional Zones: 512 Channels (128 Zones max. per radio; 250 CH max. per Zone Trunked Zones: 512 GID / 128 Zones max. per radio; 250 GID max. per Zone.
- 11 Two-Tone Decode (4 sets x 4 pairs each); Single / Two-Tone Encode (32 tones), Operator Selectable Tone (40 QT/DQT code pairs).
- 12 Kenwood LTR® Features include: GID Delete/Add, LTR® Talk Around /Scan Revert Group Display, System Scan, Group Scan, Auto Search.
- 13 FleetSync® & FleetSync® II are not compatible.
- 14 Short Text Messages are radio stored & LCD displayed; Long Text Messages require a KDS-100 and KCT-40.
- 15 FleetSync® GPS features require an internal GPS board or externally wired GPS receiver with NMEA TTL level serial data output to the internal COM 1 or 2 set to "GPS".
- 16 Requires a VGS-1 option.

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